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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/051,585

01/18/2002

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08/22/2006

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EXAMINER

WILLIAMS, JEFFERY L

ART UNIT

PAPER NUMBER

2137

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,585

Applicant(s)

SATO ET AL.

Examiner

Jeffery Williams

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the communication filed on 6/19/2006.

All objections and rejections not set forth below have been withdrawn.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/31/06 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1 **Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable**
2 **over Westheimer et al. (Westheimer), "Computer Software Protection System",**
3 **4,573,119 in view of Buerkle et al. (Buerkle), "System for Executing**
4 **Microinstruction Routines By Using Hardware to Calculate Initialization**
5 **Parameters Required Therefore Based Upon Processor Status and Control**
6 **Parameters".**

7
8 Regarding claim 1, Westheimer discloses:

9 *a RAM for storing an intermediate code representing a command control string to*
10 *be executed by a control section and an encrypted intermediate code representing*
11 *another command control string to be executed by the control section after first being*
12 *decrypted (Westheimer, fig. 1:48; 2:26-29;4:52-61; claim 8); and a CPU for controlling*
13 *execution (Westheimer, fig. 1:40).*

14 Westheimer discloses a LSI wherein a CPU controls the execution of both
15 encrypted and unencrypted instructions. Westheimer discloses that program instruction
16 or "intermediate code" are fetched by the CPU, wherein an instruction is identified by an
17 opcode and operated upon accordingly. However, Westheimer does not disclose that
18 the CPU operates using an "interpreter execution program" to process the programmed
19 instructions [encrypted or unencrypted], and that such an "interpreter execution
20 program" is stored in a ROM.

21 Buerkle teaches that LSI processors utilize an "interpreter execution program"
22 [microprogram] to allow a CPU to process intermediate code [macroinstructions]

1 according to the opcodes of the instructions. Buerkle teaches that prior art discloses
2 LSI's as storing the "interpreter execution program" in a ROM (Buerkle, "Description of
3 the Related Art").

4 It would have been obvious to one of ordinary skill in the art to recognize the
5 need for an "interpreter execution program" stored in a ROM to allow a CPU to control
6 the execution of an "intermediate code", and thus follow the LSI processor design
7 teachings of Buerkle within the LSI processor system of Westheimer. This would have
8 been obvious because one of ordinary skill in the art would have been motivated to
9 practically implement the features known in prior art to be included within LSI processor
10 systems.

11
12 Regarding claim 12, the combination of Westheimer and Buerkle disclose:

13 *the RAM, the ROM, and the CPU are formed on one chip* (Westheimer, 2:26-29).
14

15 **Claims 4 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable**
16 **over the combination of Westheimer and Buerkle in view of Hagiwara et al.**
17 **(Hagiwara) "Disk Drive computer with Programmable Nonvolatile Memory**
18 **Capable of Rewriting a Control Program of the Disk Drive", U.S. Patent 6,393,561.**
19

20 Regarding claim 4, the combination of Westheimer and Buerkle disclose:

21 *the RAM, the ROM, the CPU and the control section are formed on one chip*
22 *(Westheimer, 2:26-29).*

1 The combination of Westheimer and Buerkle discloses in general a secure and
2 programmable LSI microprocessor wherein executed instructions can be stored in
3 encrypted or decrypted form. The combination does not disclose an optical disk control
4 section and a recording/reproduction head.

5 Hagiwara teaches that programmable LSI microprocessors can be incorporated
6 with an optical disc device, wherein the control of the disk drive is by customized
7 application programs stored within the programmable LSI microprocessors (Hagiwara,
8 "Technical Field"; 5:13-59; 6:61-7:2; 15:48-53; 13:44-49; 19:30-39). The included
9 programmable LSI microprocessor section of the disk drive controls the optical disk
10 drive in response to requests from a host (Hagiwara, 11:64-67). Hagiwara teaches that
11 programmable LSI microprocessors within optical disk drives beneficially aids the
12 manufacturing cycle of such drives for customers (Hagiwara, 3:57-60; 4:55-67; 6:1-7).

13 It would have been obvious to one of ordinary skill in the art to incorporate the
14 teachings of Hagiwara for combining a optical disk drive with a programmable LSI
15 microprocessor within the secure, programmable LSI microprocessor system of the
16 combination of Westheimer and Buerkle. This would have been obvious, because one
17 of ordinary skill in the art would have been motivated by the disclosed need within prior
18 art to equip disk drives with programmable LSI microprocessors.

19 The combination of Westheimer, Buerkle, and Hagiwara disclose an *optical disk*
20 *control section* (Hagiwara, fig. 1:5) and a *recording/reproduction head* (Hagiwara, fig.
21 1:11).

1 Regarding claim 5, it contains essentially similar limitations as claim 4, and it is
2 rejected, at least, for the same reasons. Furthermore, the combination of Westheimer,
3 Buerkle, and Hagiwara disclose an "execution section" (Westheimer, fig. 1:20;
4 Hagiwara, fig. 1:5). The combination discloses that the execution of "intermediate code"
5 is to effect a useful result (Westheimer, 1:14-26), the useful result being for the
6 controlling of the reproduction/recording of information on an optical disk (see rejection
7 of claim 4). Thus the execution results in a "command control string" to control the
8 optical disk drive.

9
10 Regarding claim 6, it is rejected, at least, for the same reasons as claim 1.

11
12 Regarding claim 7, it is rejected, at least, for the same reasons as claim 4.

13
14 Regarding claim 8, the combination of Westheimer, Buerkle, and Hagiwara
15 disclose:

16 *a recording/reproduction head for recording/reproducing information on an optical*
17 *disc* (Hagiwara, fig. 1:11);

18 *an optical disc control section for controlling a motor which drives the optical disc*
19 *(Hagiwara, fig. 1:10),*

20 *wherein the optical disc control section is comprised within the control section*
21 *(Westheimer, fig. 1:20; Hagiwara, fig. 1:5), and the RAM, the ROM, the CPU and the*
22 *control section are formed on one chip (Westheimer, 2:26-29).*

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Regarding claim 9, the combination of Westheimer, Buerkle, and Hagiwara disclose:

wherein the optical disc control section is formed on the one chip (Westheimer, 2:26-29).

Regarding claim 10, the combination of Westheimer, Buerkle, and Hagiwara disclose:

wherein the intermediate code is encrypted (Westheimer, claim 8).

Regarding claim 11, the combination of Westheimer, Buerkle, and Hagiwara disclose:

the RAM stores the encrypted intermediate code and the unencrypted intermediate code (Westheimer, fig. 1:48; claim 8).

Regarding claim 13, the combination of Westheimer, Buerkle, and Hagiwara disclose:

wherein the intermediate code, represents user customized command control strings (Hagiwara, 5:36-42), and the encrypted intermediate code represents vendor proprietary command control strings (Westheimer, 1:14-26).

Regarding claim 14, it contains essentially the same limitations as claim 13, and it is rejected, at least, for the same reasons.

Response to Arguments

Applicant's arguments with respect to claims 1 - 14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See Notice of References Cited.

A shortened statutory period for reply is set to expire **3** months (not less than 90 days) from the mailing date of this communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery Williams whose telephone number is (571) 272-7965. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone

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number for the organization where this application or proceeding is assigned is (703)

872-9306.

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Business Center (EBC) at 866-217-9197 (toll-free).

J. Williams

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EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER